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S/120/62/000/002/037/047
E140/E163

AUTHORS: Kynev, St., Shoynkman, M.K., Shul'ga, I.B.,
and Fursenko, V.D.

TITLE: Contactless method of measuring the parameters of
certain semiconductors

PERIODICAL: Pribery i tekhnika eksperimenta, no.2, 1962, 154-159

TEXT: Essentially, the method consists in placing the
sample of semiconductor between two capacitor plates in a
Hartley oscillator circuit and measuring the change of grid
current. This can be calibrated in terms of the bulk
conductivity of the sample. The oscillator operates at about
10-15 Mcs. The electrodes are shaped so that the sample can be
illuminated, for determining its photoelectric properties.
Some applications are: acceptance testing of samples for their
photoelectric properties, under conditions eliminating the
distorting effects of electrodes in contact with the sample;
study of just these distorting effects; study of samples in an
enclosed volume without requiring their exposure to the
atmosphere; study of the kinetics of infra-red extinction of a
Card 1/2

L 53639-65 EWT(d)/EWT(1)/EWT(m)/EPF(c)/EWP(1)/EWA(d)/EWP(v)/T/EWP(t)/EEC(D)
EWP(k)/EWP(h)/EWP(b)/EWP(1)/EWA(h) Pf-4/Pr-4/Psb/Pi-4 IJP(c) JD/GG/GS/AT
UR/0000/65/000/000/0112/0116

ACCESSION NR: AT5010255

AUTHORS: Sheynkman, M. K.; Shul'ga, I. B.

TITLE: Device for remote measurement of parameters of thin semiconductor films

SOURCE: Mashiny i pribory dlya ispytaniya metallov i plastmass (Machines and instruments for testing metals and plastics); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1965, 112-116

TOPIC TAGS: semiconductor, semiconductor research, semiconductor material, semiconductor film/ 6NZP lamp, ENO 1 oscillograph

ABSTRACT: A device for rapid measurement of parameters of semiconductor films is described. The apparatus removes the need for direct contact of electrodes upon test specimens and permits the study of parameter distribution along the film, as well as the investigation of kinetic photoelectric processes. The method of measurement is based upon the use of a three-node generator originally proposed by Ye. K. Zavoyskiy (Metod izmereniya potentsialov vzbuzhdeniya atomov i molekul. - Eksperimental'naya i teoreticheskaya fizika, T. 6., Vyp. 1, 1956). A circuit diagram of the device is given. Special elements in its network include a 6NZP lamp and an ENO-1 oscillograph. The authors describe in detail the functions of the more

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MAZURMOVICH, Boris Nikolayevich; SHUL'GA, Ivan Kondrat'yevich;
PETROVSKAYA, Ye.P., redaktor; RYBIN, I.V., tekhnicheskiy redaktor

[Eminent Russian zoologists; a manual for teachers in secondary schools] Vydaiushchiesia otechestvennye zoologi; posobie dlia uchitelei srednei shkoly. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshchenia RSFSR, 1955. 1955. 294 p. (MLA 9:8)
(Zoologists)

TROTSSENKO, M.A.; SHUL'GA, I.N.

Determination of DDT analogues (perthane and methoxychlor) in food products. Vop.pit 21 no.4:52-55 J1-Ag '62. (MIRA 15:12)

1. Iz Ukrainського instituta pitaniya, Kiyev.
(FOOD CONTAMINATION) (DDT (INSECTICIDE))

NARINSKIY, F.I., kand.tekhn.nauk; SHUL'GA, I.V., red.; ZAGRANICHNYY, B.V.,
tekhn.red.

[Equipment for prestressing reinforced concrete; a survey]
Oborudovanie dlia napriazhennogo armirovaniia zhelezobetonnykh
konstruktsii; informatsionnyi obzor. Leningrad, Biuro tekhn.
informatsii, 1957. 41 p. (MIRA 11:5)
(Prestressed concrete)

SHUL'GA, I.V. (Moskva)

Problem of treating blepharitis with biomycin; author's abstract.
Vest.oft. 72 no.5:50-51 S-O '59. (MIRA 13:3)
(EYELIDS, dis.)
(CHLORTETRACYCLINE, ther.)

ZVEREV, A.F., inzh.; KARTALAPOV, F.F., inzh.; MAZUR, Z.M., inzh.;
OVSYANNIKOV, M.I., inzh.; SHUL'GA, I.Ya., inzh.

Concerning the use of a glass fiber tape in the manufacture of
cables. Vest.elektrom. 33 no.6:61-62 Je '62. (MIRA 15:7)
(Electric cables)

SHUL'GA, I.Ya., inzh.; MAKARENKO, R.V., inzh.

Use of "leikonat" glue for sealing polyvinyl chloride to rubber.
Vest. elektroprom. 34 no.5:64-65 My '63. (MIRA 16:5)
(Polymers) (Rubber) (Adhesives)

SHUL'GA, K. ., kand. sel'khoz. nauk; SHUL'GA, K., red.

[Manual on feed antibiotics] Spravochnik po kormovym
antibiotikam. Minsk, Izd-vo "Urozhai," 1964. 349 p.
(MIRA 17:8)

SKOROPANOV, S.G., glavnyy red.; BREZHNEV, D.D., red.; LUPINOVICH, I.S.,
akademik, red.; SINYAGIN, I.I., red.; SOKOLOV, N.S., red.;
KHOT'KO, A.I., kand.sel'skokhoz.nauk, red.; SHUL'GA, K.V., red.;
SVIRIDOV, V.I., tekhn.red.

[Reclaiming bog and swampy soils of the non-Chernozem zone of the
European U.S.S.R.; materials of the joint scientific session,
July 8-11, 1958] Osvoenie bolotnykh i zabolochennykh pochv nechernozemnoi zony Evropeiskoi chasti SSSR; materialy ob"edinennoi nauchnoi sessii 8-11 iul'ia 1958 g. Minsk, Izd-vo Akad.sel'khoz.nauk BSSR,
1960. 258 p. (MIRA 14:4)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina. 2. Chlen-korrespondent AN BSSR (for Skoropanov).
3. Akademiya nauk BSSR i Akademiya sel'skokhozyaystvennykh nauk BSSR (for Lupinovich).
(Reclamation of land) (Pest bogs)

SHUL'GA, K.V.; SERZHANINA, G.I., kand. biol. nauk, spets. red.

[Mushrooms of our forests] Griby nashikh lesov. Minsk,
Uradzhai, 1965. 195 p. (MIRA 18:10)

GOREGLYAD, Khariton Stepanovich, akademik; SHUL'GA, K.V., red.;
YERMILOV, V.M., tekhn. red.

[Hygienic inspection of animal and plant products] Vete-
rinarno-sanitarnye issledovaniia produktov zhivotnovodstva i
rastenievodstva. Minsk, Gos.izd-vo sel'khoz.lit-ry BSSR, 1962.
255 p. (MIRA 15:6)

1. Akademiya nauk Belorusskoy SSR (for Goreglyad).
(Food adulteration and inspection)

DITMAR, Andrey Borisovich; GOLUBTSOVA, Ye.S., kand. ist. nauk,
nauchnyy red.; SOLOV'YEV, A I., akademik ;
red.; PROKHODTSEVA, S.Ya., red.; SHUL'GA, L.K., mladshiy red.;
KOSHELEVA, S.M., tekhn. red.

[From Scythia to Elephantine; Herodotus' life and travels] Ot
skifii do Elefantiny; zhizn' i puteshestviia Gerodota. Moskva,
Geografiz, 1961. 85 p. (MIRA 15:6)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk (for
Solov'yev).

(Herodotus, c.484 - 425 B.C.)

L 10785-65 EWT(a)/EEG(k)-2/EEB-2/EEP(2)-Pm-4/Po-4/Pq-4/Pe-4/PK-4-1SP(6)
SSD/AFETR/AFMD(p)/ESD(dp)/ARTG(b)/ASD(a)/AFWL/ASD(a)-5/BSU GG/BB
ACCESSION NR: AP4046108 S/0302/64/000/003/0022/0023

AUTHOR: Burachenko, A. M.; Boltushkin, A. B.; Konchits, P. A.;
Savchenko, N. Ye.; Shul'ga, L. M. B

TITLE: Introducing telegraph-tape information into a "Ural-1" computer

SOURCE: Avtomatika i priborostroyeniye, no. 3, 1964, 22-23

TOPIC TAGS: digital computer, data introduction / Ural-1 computer 16C

ABSTRACT: The blueprint of an input storage device is described intended for receiving data from an ST-35 telegraph apparatus at a speed of 400 characters per min, storing data on a 17.5-mm-wide 5-channel telegraph tape, and feeding the data, at a speed of $4,500 \pm 10\%$ numbers per min, into an "Ural-1" digital computer. The use of the tape-transport mechanism of a "Minsk"-type computer is envisaged. A block diagram is supplied, and the general features of the functioning of the planned device are discussed. Orig. art. has: 1 figure.

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ACCESSION NR: AP4046108

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: DP

NO REF SOV: 000

OTHER: 000

Card 2/2

ACC NR: AT7001717

SOURCE CODE: UR/2625/66/000/020/0137/0142

AUTHOR: Mitrofanov, M. G.; Martynenko, A. G.; Shul'ga, L. P.

ORG: none

TITLE: Obtaining MS-20 aviation oil from some crudes of the Checheno-Ingush ASSR and of the Stavropol' area

SOURCE: Groznyy, Neftyanoy nauchno-issledovatel'skiy institut. Trudy, no. 20, 1966. Tekhnologiya pererabotki nefti i gaza. Neftekimiya (Technology of petroleum and gas processing. Petroleum chemistry), 137-142

TOPIC TAGS: crude petroleum, mazut, petroleum residue, lubricating oil, aviation oil, MS-20 aviation oil

ABSTRACT: The results are given of a study of the possibilities of using mazuts from Upper-Cretaceous crudes of the Malgobek and Khayan-Kort fields and from the Ozek-Suat crude of the Stavropol' area as the raw materials for obtaining MS-20 aviation oil. Concentrates of the above mazuts were studied which remain after the separation of a part of the oil fractions from the mazut. Concentrates were fractionated chromatographically and suitable fractions were blended after dewaxing. It was found that the yield of MS-20 oil from Khayan-Kort concentrate

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ACC NR: AT7001717

is about 43% based on the concentrate. The yield of MS-20 oil based on the Ozek-Suat concentrate is 38.5%; the viscosity index of the oil obtained is above 100. The concentrate of the Malgobek mazut can be used for the production of MS-20 after a certain deasphaltizing. The yield in this case is 26%. Orig. art. has: 4 tables and 1 figure.

[W. A. 68]

[BN]

SUB CODE: //21/ SUBM DATE: none/ ORIG REF: 002

Card 2/2

ALEKSANDROV, B., polkovnik; SHUL'GA, M., mayor

Tactical aerial reconnaissance. Av.i kosm. 44 no.2:92-94 '62.
(MIRA 15:3)

(Aeronautics, Military--Observations)

USSR / Cytology.

3

Abs Jour : Med Zhur - Biol., No 19, 1962, No 855:4

Author : Shul'ga, M. I.

Inst : Stalinsk med. Inst.

Title : Amitotic Division of Vegetative Nerve Cells.

Orig Pub : Tr. Stalinskogo med. in-ta, 1957, 10, 38-41

Abstract : Investigation by the Bilshovsky-Gross method of changes in nerve cells in experimental pneumoconiosis in rats caused by inhalation of sand-shale dust, showed that among the cells of lung nerve ganglia in a state of necrobiosis and necrosis, cells are found with a narrow, light aperture in a state of amitotic division (A). Daughter nuclei remain narrow, semilunar, and are unsuccessful in changing their arrangement because of the rapid rate of A. At times, A

Card 1/2

SHULGA, I. I., SHCHERBANOVA, O. I., ZHUYKOVA, I. A., KAT-LAGAYEVA, V. I.,
GALFINA, Y. S., POZLOVSKIY, V. S., IGNEVSKIY, I. L., ROVENSKAYA, V. V.

"Pneumoconiosis in workers engaged underground work
in coal mines, and means of its prophylaxis."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

SHUL'GA, M.I.

Accumulation of dust cells and their removal from dust invaded lungs. Gig. truda i prof. zab. 4 no.6:52-54 Je '60. (MIRA 15:4)

1. Institut fiziologii truda, Stalino, Donbass.
(LUNGS—DUST DISEASES)

NAVAKATIKYAN, A. O.; SHUL'GA, M. I. (Donetsk)

Changes in the nodose ganglia of the vagus nerves in experimental unilateral silicosis. Arkh. pat. no.2:27-32 '62. (MIRA 15:2)

1. Iz laboratorii klinicheskoy fiziologii (zav. - A. O. Navakatikyan) i patomorfologii (zav. M. I. Shul'ga) Nauchno-issledovatel'skogo instituta fiziologii truda (dir. - kandidat meditsinskikh nauk B. N. Onopko).

(LUNGS—DUST DISEASES) (VAGUS NERVE)

SHUL'GA, M.I. (Kyev, ul. Antema, 84. kv.5)

Islet receptors in the lungs. Arkh. anat., gist. i embr 47
no.8:87-91 Ag '64. (MIRA 18:4)

1. Laboratoriya patomorfologii (zav. -- starshiy nauchnyy sotrudnik
M.N.Shul'ga) Donetskogo instituta fiziologii truda.

5/19/66 6A-11T-
TOMILINA, T.N.; SHUL'GA, M.F.

~~XXXXXXXXXXXXXXXXXXXX~~
New operating conditions of synchro-cyclotrons. Prib.i tekhn.eksp.
no.3:16-17 M-D '56. (MLRA 10:2)

1. Ob"edinennyy institut yadernykh issledovaniy.
(Cyclotron)

SHUL'GA, N. S.

Heat capacity of magnesium-zinc ferrite [with summary in English].
Ukr.fiz.zhur. 2 no.2:suppl:54-58. '57. (MLRA 10:7)

1. Chernivets'kiy derzhavniy universitet.
(Magnesium ferrates)

SOV/81-59-9-30420

Translation from: Referativnyi zhurnal. Khimiya, 1959, Nr 9, p 52 (USSR)

AUTHOR: Shul'ga, M.S.

TITLE: The Heat Capacity of Mg_3Sb_2

PERIODICAL: Nauk. zap. Chernivets'k.un-t, 1958, Vol 34, pp 107 - 108 (Ukr.)

ABSTRACT: The values of the heat capacity of Mg_3Sb_2 (\dot{c}_p) at 100 - 500°C at intervals of 100°C are presented as average values from measurements by various methods. The experimental data are compared to the data calculated by the formula which has been proposed earlier (Termicheskiye konstanty neorganicheskikh veshchestv. Izd.-vo AS USSR, 1949) $\dot{c}_p = 28.2 + 5.60 \cdot 10^{-3}T$. The deviations amount to 2.4 - 3.6%.

A. Vorob'yev

Card 1/1

SHUL'GA, M.S. (g. Chernovtsy); SIDORYCHEVA, A.G.; SVIRIDOV, V.I.
(Rostov-na-Donu); SHEKHTERMAN, M.E. (g. Tiraspol');
ZHIGALOV, K.S. (pos. Bilimbay Sverdlovskoy oblasti); SERYAKOV, A.A.
(Murom); SAKEVICH, N.M. (Vitebsk); KAZANTSEV, I.I.

Readers suggestions. Fiz. v shkolë 21 no.6:80-81 N-D '61.
(MIRA 14:12)

1. Turochakskaya srednyaya shkola Gorno-Altayskoy avtonomnoy oblasti (for Kazantsev).
(Physics--Experiments)

SHULGA, K. S.

Peas

New varieties of peas from the "Uladovo-Liulinetskaia" Experimental Selection Station.
Sel. i sem., 19, No. 2, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, June 1952. Uncl.

SHUL'GA, M.S., kand.sel'skokhozyzystvennykh nauk

Planting forage beans along with corn for silage. Zemledelie
24 no.4:33-36 Ap '62. (MIRA 15:4)

1. Uladovo-Lyulinetskaya opytno-selektsionnaya stantsiya.
(Corn (Maize)) (Beans)

SHUL'GA, M.S., kand.sel'skokhozyaystvennykh nauk

Possibilities for increasing pea yields. Zemledelie 24
no.2:49-52 F '62. (MIRA 15:3)

1. Ulagovo-Lyulinetskaya opytno-selektсионnaya stantsiya.
(Peas)

SHUL'GA, M.S., kand. sel'skokhoz. nauk

Pea breeding at the Uladovka-Lyulintsy Experimental Breeding
Station. Agrobiologiya no.2:179-183 Mr-Apr '64. (MIRA 17:6)

1. Uladovo-Lyulinetskaya opytno-selektsionnaya stantsiya,
Vinnitskaya oblast'.

SHUL'GA, N.

Repairing cavities in the varying water-level zone of the quay walls
in the port of Batum. Mor. flot. 24 no.8:36-37 Ag '64. (MIRA 18:9)

1. Nachal'nik Novorossiyskoy gruppy ASPTR.

SHUL'GA, N.

Operation of engineering structures in the Black Sea region.
Mor.flot 25 no.1:36 Ja '65. (MIRA 19:2)

1. Nachal'nik Novorossiyskoy gruppy avariyno-spasatel'nykh,
pod'yemno-tekhnicheskikh rabot Chernomorskogo parokhodstva.

SHUL'GA, N., inzh.

Hydraulic jacks for maintenance lines. Avt.transp. 41 no.10:
24-25 0 '63. (MIRA 16:10)

SHUL'GA, N., polkovnik

A communist is an active champion of party policy. Komm. Vooruzh.
Sil. 3 no.13:35-41 J1'63 (MIRA17:7)

1. Zamestitel' nachal'nika politicheskogo upravleniya Zakavkaz-
skogo voyennogo okruga.

ACC NR: AP7003242

(A)

SOURCE CODE: UR/0198/66/002/012/0018/0026

AUTHOR: Shul'ga, N. A. (Kiev)

ORG: Institute of Mechanics, AN UkrSSR (Institut mekhaniki AN UkrSSR)

TITLE: Bending of thin physically nonlinear plates

SOURCE: Prikladnaya mekhanika, v. 2, no. 12, 1966, 18-26

TOPIC TAGS: elastic deformation, partial differential equation, successive approximation

ABSTRACT: The solution involving the bending of physically nonlinear plates is analyzed, using a successive approximation method. The first approximation corresponds to the linear problem and the n-th approximation is given by

$$-4D \frac{\partial^4 w^{(n)}}{\partial z^2 \partial \bar{z}^2} = \frac{\partial^2 A^{(n-1)}}{\partial z \partial \bar{z}} + \frac{\partial^2 B^{(n-1)}}{\partial z^2} + \frac{\partial^2 \bar{B}^{(n-1)}}{\partial \bar{z}^2},$$

together with expressions for the bending moments and the stresses. The difference $w^{(n)} - w^{(n-1)}$ is a biharmonic function and is given by the Kolosov-Muskhelishvili complex potentials or,

$$w^{(n)} - w^{(n-1)} = \operatorname{Re} \left(z \varphi^{(n)}(z) + \int \psi^{(n)}(z) dz \right).$$

The characteristics of the multi-valued functions φ and ψ are investigated first,

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and then the case of an infinite singly-connected region is considered for the case where z possesses a conformal mapping of the exterior of this region onto the interior of the unit circle. The stress concentrations are given for a plate with a circular or elliptic hole. For example, under pure bending the second approximation of the bending moment around an elliptic hole yields

$$M_{\theta}^{(2)} = M \left[2 - 4s \frac{1+\nu}{3+\nu} \frac{s - \cos 2\theta}{-2s \cos 2\theta + s^2} + \frac{72}{5} (1+\nu) \frac{\gamma M^2}{G^2 h^4} + \right. \\ \left. + \frac{16}{25} \frac{(1+\nu)(421 + 692\nu + 151\nu^2)}{(3+\nu)^2} s \frac{\gamma M^2}{G^2 h^4} \cos 2\theta \right].$$

Orig. art. has: 24 equations.

SUB CODE: 20/ SUBM DATE: 04Feb66/ ORIG REF: 003

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SHUL'GA, N.A. (Kiyev)

Banding of a thin plate weakened by a circular hole in case
of a nonlinear law of elasticity. Prikl. mekh. 1 no.11:
39-44 '65. (MIRA 19:1)

1. Institut mekhaniki AN UkrSSR. Submitted Feb. 26, 1965.

L 14013-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/EWP(j)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/
ACC NR: AP6002334 EWA(h)/EIC(m)-6 SOURCE CODE: UR/0198/65/001/012/0015/0021
IJP(c) JD/WW/EM/RM

AUTHOR: Tsurpal, I. A. (Kiev); Shul'ga, N. A. (Kiev)

ORG: Institute of Mechanics, Academy of Sciences UkrSSR (Institut mekhaniki AN UkrSSR)

TITLE: Basic equations of the thin shallow shell theory with consideration of the physical nonlinearity

SOURCE: Prikladnaya mekhanika, v. 1, no. 12, 1965, 15-21

TOPIC TAGS: shallow shell, thin shallow shell, nonlinear shell theory, physically nonlinear shell

ABSTRACT: A basic system of equations for the theory of thin shallow shells is constructed assuming a nonlinear dependence between stresses and strains of the shell material. The linear equations of the Theory of Thin Shells developed by V. V. Novozhilov, and the nonlinear stress-strain relationships established in the Nonlinear Mechanics by G. Kauderer are used in constructing the above-mentioned basic system of equations, with the assumptions that the Kirchhoff-Love hypotheses are valid, that the displacements and strains in the shell are small and cause stresses which are within the elastic range of the shell material, such as nonlinearly elastic materials (plastics, high-strength steels, nonferrous metals and their alloys, and others). This system of nonlinear equations can also be used in investigating the shell behavior within the elastic-plastic stage of deformation. The system can be simplified

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ACC NR: AP6002334

for particular cases of the state of the medium, e.g., a system of linear equations of the thin shallow shell theory is obtained for those media which obey Hooke's law. The authors intend to devote further publications to the integration of the proposed basic system of nonlinear equations, and to the solution of problems of stress concentration around holes in shells with the physical nonlinearity of the shell material taken into account. Orig. art. has: 1 figure and 34 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 04Apr65/ ORIG REF: 003/ OTH REF: 003/ ATD PRESS: 4196

Card

2/2

BERGMAN, A.G.; SHUL'GA, N.A.

Interaction of urea with the nitrates of lithium, sodium,
potassium, and barium. Zhur. neorg. khim. 9 no.5:1218-
1220 My '64. (MIRA 17:9)

1. Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut.

AUTHORS: Shul'ga, N. A., Bergman, A. G.S/078/60/005/03/025/048
B004/B015

TITLE: The Meltability in the System of Fluorides and Silicates of Sodium and Potassium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 3, pp 649-653 (USSR)

ABSTRACT: The system Na, K || F, SiO₃ was investigated by the visual-poly-thermal method. The authors mention the binary component systems (Fig 1, Table 1) that have already been investigated by other scientists: Na₂F₂ - K₂F₂ (Ref 10), K₂F₂ - K₂SiO₃ (Ref 7), Na₂F₂ - Na₂SiO₃ (Ref 4), and K₂SiO₃ - Na₂SiO₃ (Ref 3). The authors repeated the investigation of the last-mentioned binary systems which led to some corrections: 20 sections were examined in the system Na, K || F, SiO₃ (Table 2, Figs 2-4). The crystallization surface consists of the six crystallization zones of the four components and the two complex salts Na₂SiO₃·3K₂SiO₃, and 2Na₂SiO₃·3K₂SiO₃. The system is classified as a nondiagonal, semi-reversible, reciprocal system. The crystallization zones meet in

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LAPINSKY, M.Ya.; SHUL'GA, N.D. (Leningrad)

Diagnosis of periarteritis nodosa (Kussmaul-Meier disease). Klin.
med. 35 no.9:153-154 S '57. (MIRA 10:11)

1. Iz kafedry gosspital'noy terapii No.2 (nach. - prof. Z.M.
Volynskiy) Voenno-meditsinskoy ordena Lenina akademii imeni S.M.
Kirova.
(PERIARTERITIS NODOSA, diag.)

137-58-3-5498

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 144 (USSR)

AUTHOR: Shul'ga, N. G.

TITLE: Magnetic Roasting Treatment of Highly Coercive Fe-Ni-Al Alloys With Varying Co Content (K voprosu o magnitnotermicheskoy obrabotke vysokokoertsitivnykh zhelezo-nikel'-alyuminiyevykh splavov s razlichnym sodержaniyem kobal'ta)

PERIODICAL: Nauchn. zap. L'vovsk. politekhn. in-t, 1956, Nr 43, pp 55-63

ABSTRACT: The four alloys (A) investigated contained no Cu and were composed of 20 percent Ni, 11.5 percent Al, and 6-12 percent Co. Specimens (S) of each A were cast with the following dimensions: 8x8 mm, 12x12 mm, 16x16 mm, and 20x60 mm. Heat treatment conditions ensuring optimal magnetic properties without the employment of a magnetic field (MF) were determined experimentally for each A and for the dimensions of each S; the changes in properties produced by superimposing an MF in the course of the heat treatment were then studied. It is established that in A's containing 6-12 percent Co, the superposition of an MF produces a significant increase in the magnetic energy, while the H_c remains almost unchanged; this is primarily

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137-58-3-5498

Magnetic Roasting Treatment of Highly Coercive Fe-Ni-Al Alloys (cont.)

attributable to an increase in residual inductivity (which amounts to 16-20 percent in A's of small and medium cross sections). Increasing the Co content in the A does not substantially affect the results of the MF treatment, whereas the magnitude of magnetic energy is considerably increased. It is recommended that cooling in an MF be employed in the manufacture of magnets made of A's containing 6-12 percent Co.

V. M.

Card 2/2

SHULGA, N.G.

137-58-1-1240

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 166 (USSR)

AUTHORS: Shul'ga, N.G., Mikhaylov, A.K.

TITLE: Some Data on the Sulfidation of Steel and Iron (Nekotoryye dannyye po sul'fidirovaniyu stali i chuguna)

PERIODICAL: Nauchn. zap. L'vovsk. politekhn. in-t, 1956, Nr 43, pp 130-136

ABSTRACT: An investigation of various procedures for sulfidation (S) of steel and iron. It was established that at temperatures of 200-300°C, S virtually does not occur. When S is performed at temperatures of 560-570°C in a bath, followed by holding for 1-6 hours, the bath contents being (%):

FeS 13.2, Na₂SO₄ 3.4, K₄Fe (CN)₆ 3.4, the rest being neutral chlorine salts, a diffusion layer is formed. The structure of the sulfides is complex and is not always revealed by etching. S increases the wear resistance of steel and iron to friction with lubricant. Under the conditions of solid friction, S affords no advantages. Bibliography: 10 references.

Card 1/1

M. Ch.

1. Steel--Sulfation--Processes 2. Iron--Sulfation--Processes

Translation from. Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 244 (USSR)

AUTHOR: Shul'ga, N.G.

TITLE: The Structure and Magnetic Properties of Iron-nickel-aluminum Alloys With Small Amounts of Added Si (Struktura i magnitnyye svoystva zhelezo-nickel'-aluminiumyevykh splavov s nebol'shimi dobavkami Si)

PERIODICAL: Dokl. L'vovsk. politekhn. in-ta, 1957, Vol 2, Nr 1, pp 223-228

ABSTRACT: The effects of addition of Si upon the properties of alni alloy (Al-Ni-Fe) are investigated. It is found that the magnetic properties in the cast state are lower than after heating and cooling. Addition of Si significantly improves hardenability. Research data make it possible to assert that when it is necessary to obtain high residual induction with some reduction in coercive force, the addition of 0.25 percent Si to the alloy, with reduced Al content, is to be recommended, as is heat treatment with oil quenching. Experimental results obtained show that the value of the coercive force is determined not only by the dimensions and shapes of the precipitated ferromagnetic phase, but apparently to a considerable degree by the natural matrix. P.N.

Card 1/1

1. Iron nickel aluminum alloys--Mechanical properties 2. Iron nickel aluminum alloys--Magnetic properties 3. Silica--Applications

SOV/137-59-3-6466D

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 218 USSR)

AUTHOR: Shul'ga, N. G.

TITLE: An Investigation of Means for Improving the Magnetic Properties of Highly Coercive Fe-Ni-Al Alloys (Izyskaniye sposobov povysheniya magnitnykh svoystv vysokokoertsitivnykh zhelezo-nikel'-aluminiumevykh splavov)

PERIODICAL: Author's dissertation for the degree of Doctor of Technical Sciences, presented to the Lvovsk. politekhn. in-t (Lvov Polytechnic Institute), Lvov, 1958

ABSTRACT: The highly coercive Fe-Ni-Al alloys investigated were subjected to step-wise heat-treatment procedures without being subjected to the influence of a magnetic field. The effect of various procedures of step-wise magnetic-thermal treatment on the magnetic properties of alloys containing 2-12% Co was studied together with the effect of various heat-treatment procedures on the magnetic properties of alloys containing small quantities of Si, Ti, and Si+Ti+Cu. Alloys in equilibrium and highly-coercive states were investigated with the aid of an electron microscope, and a relationship was established between

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SOV/137-59-3-6466D
An Investigation of Means for Improving the Magnetic Properties (cont.)

their structure and their magnetic properties.

I. B.

ASSOCIATION: L'vovsk. politekhn. in-t (L'vov Polytechnic Institute), L'vov.

Card 2/2

S/137/61/000/012/005/149
A006/A101

AUTHORS: Shul'ga, N.G., Mikhaylov, A.K.

TITLE: Investigating the effect of some factors on stability of base metal thermocouples

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 13, -abstract
12B83 ("Dokl. L'vovsk. politetkhn. in-ta", 1958, v. 2, 307 - 312)

TEXT: An investigation was made of the causes affecting the deviations of thermocouple readings during their operation. The experimental set-up is described, maximum deviations and readings of the thermocouples are presented, obtained during holding and periodical checking at constant temperature. The accuracy of the thermocouple readings is influenced by 1) non-homogeneity of the thermo-electrode material; 2) changes in the metal structure during operation of the thermocouples; 3) errors in the measurement of thermo-emf; 4) presence of parasitic thermo-emf in the connecting conductors and terminals; 5) insufficient immersion depth of the thermocouple into the medium where the temperature is determined. The greatest effect on the stability of thermocouple readings is exerted by the degree of homogeneity and structural changes of the metal during

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69194

SOV/137-59-12-27371

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 12, p 235 (USSR)

18.1142

AUTHOR: Shul'ga, N.G.

TITLE: Improvement of Magnetic Properties of High-Coercive Alloys

PERIODICAL: Byul. tekhn. ekon. inform. Sovnarkhoz L'vovsk. ekon. adm. r-na, 1958, Nr 9, pp 36 - 37

ABSTRACT: The author investigated the possible admixture of small amounts of Si, Ti, joint admixtures of Si and Ti, Ti and Cu, Si and Cu to triple Fe-Ni-Al alloys of the aluminum-nickel type in order to raise their magnetic properties (B_r). It was established that the admixture of 0.25% Si or 0.5% Ti to Fe-Ni-Al alloys reduced H_C and increased B_r . By the simultaneous introduction of Si and Ti to aluminum-nickel alloys, H_C of 580 - 600 oersted and B_r of 6,400 - 6,200 gauss may be obtained. Stepped magneto-thermal treatment of aluminum-nickel alloys with a low C content increases the magnetic energy of these alloys by 17 - 20%. For aluminum-nickel-cobalt alloys with Co $\geq 6\%$, the application of a magnetic

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69191

Improvement of Magnetic Properties of High-Coercive Alloys

SOV/137-59-12-27371

field in heat treatment is absolutely recommended. Magnetic properties equivalent to those of "12" aluminum-nickel-cobalt alloy may be obtained by varying the proportion of basic components in alloys with about 4% Co.

I.B.



Card 2/2

18.1142

68694
S/180/60/000/01/018/027
E073/E135

AUTHOR: Shul'ga, N.G. (L'vov)

TITLE: Search for Methods of Increasing the Magnetic Properties
of High Coercive Force Magnetic Alloys 18

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplivo, 1960, Nr 1, pp 127-133 (USSR)

ABSTRACT: Development of new high coercive force materials in recent years consisted mainly of developing alloys with high cobalt content. Due to high cost and various technological factors this does not satisfy requirements. The use of alni type alloys is limited due to their relatively low residual induction. Therefore, the possibility of producing alni alloys with increased residual induction is of great scientific and practical interest. In this paper the author deals with improving the magnetic properties of alni alloys by appropriate heat treatment, addition of small quantities of cobalt combined with the most effective methods of heat treatment and some other methods which are described in the paper. The influence of small quantities of silicon on the structure and the magnetic properties of alni alloys was 4

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E073/E135

Search for Methods of Increasing the Magnetic Properties of High
Coercive Force Magnetic Alloys

investigated on four alloys which, in addition to Fe, contained the following: Alloy Nr 1 - 24.20% Ni, 10.10% Al, 0.06% Si; Alloy Nr 2 - 23.94% Ni, 10.21% Al, 0.28% Si; Alloy Nr 3 - 24.08% Ni, 10.13% Al, 0.52% Si; Alloy Nr 4 - 23.39% Ni, 10.34% Al, 0.79% Si. Table 2 contains data on the magnetic properties of the investigated alloys after optimum heat treatment; in Fig 1 the changes are plotted of the coercive force, of the residual induction and the magnetic energy of alloys after casting and heat treatment for obtaining optimum magnetic properties. The results indicate that for obtaining a high residual induction at a slightly reduced coercive force, it is advisable to add 0.25% Si to alloys with a reduced content of aluminium and heat treatment in the case of quenching in oil, and a 0.50 to 0.75% Si addition for alloys which are to be cooled in still air. For alloys of the here given composition $H_c = 230$ to 350 Oe, $B_r = 8700$ to 7800 Gauss can be obtained. For elucidating the dependence between the structure and the magnetic properties, the alloys were subjected to chemical, phase,

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2/7

68694

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E073/E135

Search for Methods of Increasing the Magnetic Properties of High
Coercive Force Magnetic Alloys

X-ray structural and electron microscope investigations after various types of heat treatment. Some of the results are given in Table 3. To study the influence of titanium on the structure and magnetic properties of alni alloys with a low aluminium content, alloys were studied with compositions as given in Table 4, p 129, the titanium content varying between 0.51 and 2.10%. It was found that for all heat treatment variants addition of 0.5% Ti would lead to an appreciable increase of the residual induction and to a drop in the coercive force, whereby the magnetic energy remains almost unchanged. After cooling in still air in alloys containing 1.0 to 2% Ti residual induction decreases, whilst the coercive force and the magnetic energy increase. With further increase of the titanium content a sharp drop in the coercive force is observed, whereby the residual induction changes little. Study of the influence of tempering on the magnetic properties of alloys heated to 1230 to 1250°C and cooled in still air indicates that for all the alloys

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68694

S/180/60/000/01/018/027
EO73/E135

Search for Methods of Increasing the Magnetic Properties of High
Coercive Force Magnetic Alloys

under consideration tempering at 550 to 650 °C does not bring about an appreciable change in the coercive force but for some of the studied alloys it does cause a sharp increase in the residual induction; for specimens of an alloy containing 2% Ti the residual induction increased from 6400 to 7500 Gauss (specimens 16 x 16 x 60 mm). For alloys of the mentioned average composition the following values can be obtained: $H_c = 280$ to 400 Oe, and $B_r = 7100$ to 7500 Gauss. Analysis of the results of investigation of the equilibrium state of titanium containing alloys leads to the assumption that an increase in the difference between the periods of the decomposition phases, preferential alloying of the NiAl matrix with titanium, brings about an acceleration of the process of phase isolation. The presence of a new phase also has an appreciable influence on the kinetics of transformation. In particular it was established that the β_2' -phase reduces considerably the inclination to supercooling of alloys. The author also studied a number

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S/180/60/000/01/018/027

E073/E135

Search for Methods of Increasing the Magnetic Properties of High
Coercive Force Magnetic Alloys

of cobalt alloyed alni alloys in which the nickel and aluminium contents were varied but the cobalt content was maintained constant at 4%. The compositions of the investigated alloys are given in Table 5, p 131. Alloys containing between 21 and 27% Ni and an average of 10% Al were found to have very poor magnetic properties. Of the alloys containing 12% Al, the one with 24% Ni and 4% Co reached values of $H_c = 440$ to 450 Oe, $B_r = 6750$ to 6800 Gauss after heating to $1230-1250$ °C, quenching in oil and tempering at 700 °C in the case of specimens of 16×16 mm cross-section; still better magnetic properties were obtained for specimens of 12×12 mm cross-section. The best magnetic properties for the alloy 27/12/4 were obtained after the following heat treatment: solidification in an earthen mould with cooling down to 1000 to 1100 °C, soaking for 5 to 10 min at 1250 °C, quenching in boiling water and tempering for 1.5 hours at 750 °C. The resulting magnetic properties were: $H_c = 550$ to 600 Oe, $B_r = 7100$ to 6300 Gauss. In Fig 4 ✓

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S/180/60/000/01/018/027

E073/E135

Search for Methods of Increasing the Magnetic Properties of High
Coercive Force Magnetic Alloys

the magnetic properties are plotted of this alloy after various heat treatments; from the point of view of the magnetic properties this alloy is equivalent to alnico. A series of alloys with compositions as given in Table 6 containing 6 to 12% Co were used for studying the influence of the magnetic field during heat treatment on the magnetic properties of alnico alloys. The investigated alloys had average contents of 20% Ni, 11.5% Al and 6-12% Co. Specimens 60 mm long and respectively 8 x 8, 12 x 12, 16 x 16 and 20 x 20 mm were used in the tests. Table 7 shows the changes in the magnetic properties for the alloy Nr 16 (20.1% Ni, 11.3% Al, 6.1% Co, rest Fe) resulting from the application of a magnetic field as compared with the magnetic properties after optimum heat treatment. On the average, the increase of the residual induction resulting from the application of a magnetic field is 16 to 18% for alloys with 6% Co, whereby the higher residual inductions apply to specimens of smaller cross-sections. Magnetic ✓

Card
6/7

37975

S/137/62/000/005/095/150

A006/A101

12 11 40
AUTHOR: Shul'ga, N. G.

TITLE: Magnetic properties of iron-nickel-aluminum alloys with high values of residual induction

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 64, abstract 5I381 ("Dokl. L'vovsk. politekhn. in-ta", 1961, v. 5, no. 1, Mekhanika, 158 - 161)

TEXT: The author investigated alloys containing 24% Ni, 10% Al, two of which were additionally alloyed with Si 0.06 - 0.52%, and 4 alloys with Ti 0.54 - 1.97% (the rest Fe). A reduced Al content in these alloys promotes an increase of residual induction B_r and a decrease in H_c . In alloys with 0.5% Ti, B_r increases and H_c decreases; in alloys with 2% Ti, B_r drops and H_c and the magnetic energy increase. In all investigated alloys a heterogeneous structure is observed after annealing, quenching and treatment for optimum magnetic properties (high-coercive state). The magnitude of H_c varies from 250 - 400, and B_r from 8,500 to 7,500 depending on the heat treatment conditions. Diagrams are presented

Card 1/2

S/137/62/000/005/095/150
A006/A101

Magnetic properties of...

showing the electron-microstructure of an alloy in 5,000 magnification in annealed state, and in 40,000 magnification, after quenching and treatment for maximum H_c .

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 2/2

37992

S/137/62/000/005/140/150

A052/A101

1.2216
AUTHORS:

Gal'chinskiy, L. V., Shul'ga, N. G.

TITLE:

The effect of capacity at electrostatic welding on the thermal welding cycle, structure and strength of the welded joint

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 46, abstract 5E241
("Dokl. L'vovsk. politekhn. in-ta", 5, no. 1, 1961, Mekhanika, 183 - 188)

TEXT:

The effect of capacity of capacitors was investigated when welding the Cu-filament end of a bulb to the low-carbon zinc-coated steel base. The capacity was varied within 20 - 120 μ F at a constant charging voltage of capacitors of 520 volts, at the transformation ratio of the welding transformer of 220 and at a pressure on the welding spot of 7 kg. The change of capacity at electrostatic welding affects essentially the thermal welding cycle which, in its turn, leads to a change of the welding spot structure and of the strength of the welded joint. At the above-mentioned constant parameters the maximum strength of welded joints is reached at a capacity of 120 μ F. V. Klyuchnikova
[Abstracter's note: Complete translation]

Card 1/1

SHUL'GA, N.G.; GAL'CHINSKIY, L.V.

Phase transformations in the system iron - zinc - copper during
condenser discharge welding. Izv. vys. ucheb. zav.; Chern. met. 5
no.9:180-187 '62. (MIRA 15:10)

1. L'vovskiy politekhnicheskii institut.
(Electric welding) (Phase rule and equilibrium)

ACCESSION NR: AP3010786

S/0148/63/000/009/0156/0160

AUTHORS: Shul'ga, N. G.; Zamora, M. F.

TITLE: Dilatometric analysis of phase transformations in high-chrome steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 9, 1963, 156-160

TOPIC TAGS: dilatometer, dilatometric analysis, dilatometry, phase transformation, steel, high-chrome steel, chrome, chromium, martensite steel, Kh13 steel, Kh17 steel, Kh18MTF steel, carbon, nickel

ABSTRACT: Authors carried out dilatometric studies on samples of Kh13, Kh17 and Kh18MTF steels. Microstructure of all annealed steel samples was ferrite with grain size of 8-5 and with a small amount of carbides. After hardening, the microstructure of the Kh18MTF steel sample remained ferrite, but the grain size was increased considerably and the carbide quantity visible under a microscope was reduced. The Kh13

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ACCESSION NR: AP3010786

steel had a martensite structure with a certain amount ferrite after hardening. Microstructure of the Kh17 steel samples depends largely upon their chemical composition. The microstructure of hardened Kh17(5) steel sample with a content of chromium on the upper and of carbon and nickel on the lower strain limit does not differ from Kh18MTF steel microstructure. The remaining Kh17 steel samples have a ferrite-martensite structure after hardening. The transformations in the steels were analyzed in connection with an analysis of the problem concerning the possibility of utilizing high-chrome steels without any other alloying additions in metal-to-glass seals. The measurements were carried out on a Chevenauer differential dilatometer with optical recording. Samples were heated to 1000-1100C. Higher temperatures were not used because the quartz begins to deform and precise measurements cannot be effected. Analysis of dilatometric curves shows that a ferrite-austenitic transformation takes place in some of the steels. No transformations take place in the case of Kh18MTF and Kh17(5) steels at heating up to

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ACCESSION NR: AP3010786

1100C. Curves for the Kh17 steels of other heats are also somewhat close to the curves for Kh18MTF steel at a temperature below critical, but differ by a change in path of the curve during ferrite-austenitic transformation. A reduction in the specific volume takes place in the Kh17(17) samples at 1000C, corresponding to an α - γ transformation. In some of the chrome steels (Kh13, Kh17) with a content of carbon and nickel on the upper strain limit, an austenite-martensite transformation can occur with air cooling, accompanied by an increase in volume and taking place at temperatures when the glass had already lost its plasticity. For this reason, they are unacceptable for glass-to-metal seals. In the case of a non-ferrite, high-chrome steel with glass seal, the utilization of heat treatment methods, assuring a non-martensite transformation, is the determining factor. Orig. art. has: 3 figures.

ASSOCIATION: L'vovskiy politekhnicheskii institut (Lvov polytechnic institute)

Card 3/4

L 57528-65 EPA(s)-2/EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(z)/
EWP(b) Pad/Ps-4/Pu-4 IJP(c) JD/HW/JG
ACCESSION NR: AR5015191 UR/0137/65/000/005/1060/1060

SOURCE: Ref. zh. Metallurgiya, Abs. 51387

AUTHOR: Shul'ga, N. G.; Afanas'yev, P. D.

TITLE: Magnetic properties of iron-nickel²⁷ aluminum²⁷ alloys with additions of
silicon, titanium, and columbium²⁷

CITED SOURCE: Sb. dokl. na Vses. soveshchanii po litym splavam dlya postoyan.
magnitov, 1962. Saratov, 1964, 55-62

TOPIC TAGS: iron base alloy, nickel containing alloy, aluminum containing alloy,
silicon containing alloy, titanium containing alloy, columbium containing alloy,
magnetic property, demagnetization, magnetic alloy, ferromagnetic material

TRANSLATION: A study was made of the effect of silicon, titanium, and niobium on
the magnetic properties of Al-Fe alloys. (To increase magnetic energy, 0.3-0.5%
silicon should be added. To increase H_c with an acceptable lowering of B_r , it is
necessary also to add up to 0.5% columbium. Silicon and also titanium (up to 1%)
increase the coefficient of curvature of the demagnetization curve, gamma.
Columbium decreases gamma. With introduction of more than 1% titanium, gamma

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L 57528-65

ACCESSION NR: AR5015191

decreases. (From R. Zh. Elektrotehnika)

SUB CODE: MM

ENCL: 00

dm
Card 2/2

SHUL'GA, N.G.; ZAMORA, M.F.

Characteristics of the use of alternating current for structural analysis of ferromagnetic materials by the electric resistance method. Defektoskopiia no.1:82-86 '65.

(MIRA 18:6)

1. L'vovskiy politekhnicheskii institut.

L 55254-65 EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(z)/EWP(b)/
EWA(c) Pad/Pr-4/Ps-4/Pu-4 IJP(c) JD/HW/JG

ACCESSION NR: AP5010376

UR/0145/65/000/003/0125/0132
659.15

AUTHORS: Shul'ga, N. G. (Doctor of technical sciences, Professor); Afanas'yev, P. D.
(Candidate of technical sciences); Yaremkevich, S. K. (Aspirant)

TITLE: Structure, magnetic properties, and new testing methods of several highly
coercive alloys based on the Fe-Ni-Al system

SOURCE: IVUZ. Mashinostroyeniye, no. 3, 1965, 125-132

TOPIC TAGS: magnetic material, coercive force, magnetic field

ABSTRACT: As a continuation and extension of previous work (P. D. Afanas'ev.
Issledovaniye struktury i magnitnykh svoystv litykh vysokokoertsitivnykh zhelezo-
inkel'-alyuminiyevykh splavov s prisadkami kreminya, niobiya, titana i azota,
Kandidatskaya dissertatsiya, L'vovskiy politekhnicheskii institut, L'vov, 1965), the
structure and magnetic properties of 17 different alloys based on the Fe-Ni-Al and
Fe-Ni-Al-Co systems were investigated, and new methods of determining the magnetic
properties were tried. Electron microscopic investigation of the alloy structures
supported the findings of N. G. Shul'ga (Izyskaniyesposobov povysheniya magnitnykh
svoystv vysokokoertsitivnykh splavov, "Izvestiya AN SSSR, OTN, Metallurgiya i

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L 55254-65

ACCESSION NR: AP5010376

6
toplivo," 1960, No. 1) that elements entering the β -phase determine the residual induction, while the high coercive forces are dependent on the alloying element content in the matrix. The properties and heat treatments of the 17 alloys are summarized in Table 1 on the Enclosure, from which it can be seen that Ti, Nb, and N increase the coercive forces of the alloys, while Si lowers them. Si increases the residual inductance, Ti and Nb decrease it, while N has no significant effect. Two methods of determining the magnetic properties were tried, using an AC induction method with an oscilloscope and using the Hall effect in a DC apparatus. In the first method the 12 x 12 x 60 mm samples with the induction coils were placed in a strong field permeameter where they were AC magnetized. The magnetizing coil and induction coil signals were viewed on an oscilloscope and a hysteresis curve could easily be generated with 4-5% accuracy. In the second method a Hall transducer (made of n-Ge) in a special nonmagnetic holder was placed on the neutral line of the sample, perpendicular to the magnetic flux. The magnetic field strength was measured and thus the coercive force of the permanent magnets. The apparatus has to be recalibrated for each new sample geometry. These methods have been incorporated in a magnetic testing apparatus described by P. P. Markin (Elektronnoye ustroystvo ferrottestera dlya ispytaniya postoyannykh magnitov, "Izvestiya vyzov. Elektromekhanika," 1962, No. 4). Orig. art. has: 5 figures, 3 formulas, and 2 tables.

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L 55254-65
ACCESSION NR: AP5010376

ASSOCIATION: L'vovskiy politekhnicheskij institut (L'vov Polytechnical Institute)

SUBMITTED: 28Oct64

ENCL: 01

SUB CODE: MM, EM

NO REF SOV: 008

OTHER: 000

Card 3/4

SHUL'GA, N.G., doktor tekhn. nauk, prof.; ZAMORA, M.F., inzh.

Investigating dilatometric curves and electric resistance of
high-chromium steel depending on the phase composition. Izv.
vys. ucheb. zav.; mashinost. no.3:133-143 '65. (MIRA 18:6)

1. L'vovskiy politekhnicheskii institut.

MAKSAKOV, Vasilii Gavrilovich; SHUL'GA, N.I., redaktor; SAMSONOV, S.S., redaktor; KARASIK, N.P., ~~tekhnicheskii~~ redaktor.

[Operations of narrow-gauge locomotives in lumbering; aid to locomotive machinists] ~~Eksploatatsiia uskokoleinykh parovozov na lesozagotovkakh; v pomoshch' mashinistu parovoza.~~ Moskva, Goslesbunizdat, 1954. 61 p. (MIRA 7:12)
(Locomotives)

SOV/124-58-3-3476

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 126 (USSR)

AUTHOR: Shul'ga, N. I.

TITLE: Investigation of the Dynamic Characteristics of 750-mm-gage
Lumber-hauling Railroad Locomotives (Issledovaniye dinami-
cheskikh kharakteristik lokomotivov lesovoznykh zheleznikh
dorog kolei 750 mm)

PERIODICAL: Tr. Tsentr. n. -i. in-ta mekhaniz. i energ. lesn. prom-sti,
1957, Vol 6, pp 111-140

ABSTRACT: Bibliographic entry

Card 1/1

SHUL'GA, N. I.: Master Tech Sci (diss) -- "Investigation of the operating properties of the locomotives of forest rail lines with 750-mm wheels on the basis of their traction and dynamic characteristics". Moscow, 1958. 28 pp (Min Higher Educ USSR, Moscow Forestry Engineering Inst), 130 copies (KL, No 4, 1959, 128)

SHUL'GA, N.K.

On the 50th anniversary of the Land Improvement Engineering
Institute of Novocherkassk. Gidr. i mel. 10 no.4:55-59 Ap '58.
(MIRA 11:5)

1. Direktor Novocherkasskogo inzhenerno-meliorativnogo instituta.
(Novocherkassk---Hydraulic engineering---Study and teaching)

GARIN, K.S., kand.sel'khoz.nauk; KOVAL', V.D., kand.sel'khoz.nauk;
SHUL'GA, N.K., kand. sel'khoz.nauk; ORLOVA, V.P., red.;
BELOVA, N.N., tekhn. red.

[Irrigation of corn]Oroshenie kukuruzy. Moskva, Sel'khoziz-
dat, 1962. 79 p. (MIRA 16:3)
(Corn (Maize))--Irrigation)

KOVAL', V.D., dotsent (Novocherkassk); SHUL'GA, N.K., dotsent (Novocherkassk)

Economic effectiveness of the saturation irrigation of grain crops.
Gidr. i mel. 17 no.1:1-7 Ja '65. (MIRA 18:4)

MASLOV, Nikolay Nikolayevich; SHUL'GA, Nikolay Maksimovich; POSTERNYAK, Ye.F., red.; VASIL'YEV, Yu.A., red. 1zd-va; BELOGUROVA, I.A., tekhn. red.

[Automatic devices for program control of the running-in and testing of engines] Avtomaticheskie programmnye ustroistva dlia upravleniia protsessom prirabotki i ispytaniia dvigatelei. Leningrad, 1962. 21 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen передovym opytom. Mekhanicheskaiia obrabotka, no.6) (MIRA 15:11)

(Gas and oil engines--Testing)

(Automatic control)

SHUL'GA, N.S.

Bionomic conditions in the Maykop Basin of the Crimea. Trudy
Inst.min.resur.AN URSR no.1:43-50 '59. (MIRA 12:8)
(Crimea--Zoology--Ecology)

SHEVCHENKO, L.F.; PYASETSKAYA, Ye.N.; GORBACH, G.I.; SHUL'GA, O.Ye.

Study of outbreaks of epidemic hepatitis in two villages of Chernogov
Province. Zhur.mikrobiol.,epid.i immun. 40 no.12:114 D '63.

(MIRA 17:12)

1. Iz Kiyevskogo instituta epidemiologii i mikrobiologii i Chernigov-
skoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

SHUL'GA, P. I.

Electric Relays

Automatic control of the working condition of two way tubes
of high frequency protective relays. Elek. sta. 23 no. 3, 1952

Inzh.

SO: Monthly List of Russian Accessions, Library of Congress, July 195²₃, Uncl.

SAVINOV, Ye.P.; GELESKUL, N.N.; SHUL'GA, P.I.

Design of tree belts. Put' i put.khoz. 7 no.7:43 '63.
(MIRA 16:10)

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| 1ST AND 2ND ORDERS | | | | | | | | | | | | | | | | | | | | | | | | | | 3RD AND 4TH ORDERS | | | | | | | | | | | | | | | | | | | | | | | | | |
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| COMMON ELEMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | COMMON VARIABLES INDEX | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>PA</p> <p>The Inachkov salt dome near the city of Zubov. A. M. Kytsiha and P. L. Shulga. <i>J. Geol., Acad. Sci. Ukrain. S. S. R. S.</i> No. 3, 157-79 (in English, 179) (1938).—Data on the Eulanov Devonian salt dome. F. H. Rathmann</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>SECOND SYMBOLIC</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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~~professors~~

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1. Akademiya nauk Ukrayins'koyi RSR (for Semenenko). 2. Instytut geologichnykh nauk Akademiyi nauk Ukrayins'koyi RSR (for Shul'ha).
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USSR/ Geology - Zoology

Card 1/1 Pub. 46 - 7/24

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Title : On the pelecypoda in the carbon strata of the Galician-Volhynian depression and their stratigraphic importance

Periodical : Izv. AN SSSR. Ser. geol. 6, 75-84, Nov-Dec 1954

Abstract : Pelecypoda remnants discovered in the carbon strata of the Galician-Volhynian depression are described and certain questionable problems regarding the stratigraphy of this fauna deposit group are explained. Twelve references: 7 USSR; 2 Polish; 1 German and 2 Belgian (1924-1952). Table.

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(Dnieper Lowland--Geology, Stratigraphic)

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Academy of Sciences of the U.S.S.R. in the summer of 1956. Visnyk
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(Dniper Valley--Geological surveys) (Donets Basin--Geological
surveys)

AUTHOR
TITLE

SHUL'GA P.L.

On the Break in the Deposits at the Boundary Between the Bashkirian and Moscow Stages in the Dnepr - Donets Depression.

(O pereryve v otlozheniyakh na granice Bashkirskogo i Moskovskogo yarusov v Dneprovsko-Donetskoy vpadine - Russian)

Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 5, pp 1127-1129 (U.S.S.R.)
Received 7/1957

PERIODICAL

ABSTRACT

The middle carbonaceous deposits in the Dnjepr-Donets-depression have been known since a relatively long time. Up to now it was considered as established that the middle carboniferous forms an uninterrupted mass in this depression. The first informations about break came from the bore-hole near Chernigov. Here the boundary between the Bashkirian and the Moscow stage was very sharp. In the upper part of the first Carbonicola aquilina zone was found. This corresponds to the suite C₂ of the Donets-basin. This fact seems to indicate that in this profile the upper strata of the Bashkirian stage (corresponding to the suite C₂ of the Donets-basin) are lacking. The author comes to following final conclusions:

- 1) The conglomeration of deposits in the course of the middle carboniferous was discontinuous in the Dnjepr-Donets-depression. The main break is here at the boundary of the Bashkirian and Moscow stages.
- 2) The break was accompanied by an erosion (denudation) of Bashkirian deposits which is particularly deep in the vaultnear parts of the saliferous structures of the depression.
- 3) The beginning of the Moscow sedimentation on various structure-elements

Card 1/2

AUTHORS

Shul'ga, P.L., Ishchenko, A.M.,
Ishchenko, T.A. and Gorak, S.V.

20-4-42/60

TITLE

New Data Concerning the Devonian of the Dnepr-Donets
Depression.
(Novyye dannyye o devone Dneprovsko-Donetskoy vpadiny.)

PERIODICAL

Doklady Akademii nauk SSSR, 1957, Vol. 115, Nr 4,
pp. 780-782 (USSR)

ABSTRACT

Devonian deposits in a normal, undisturbed stratification above the salt mass in the above-mentioned depression were hitherto unknown, although they were since 20 years discovered in breccias at several places. This rendered difficult the determination of the character of the upper salt mass as well as of its age. Just as unsolved remained the problem of the salt age, although several researchers stubbornly ascribed to it a Jivet age. Below the Devonian of the Chernigov elevation and the Pripyat' depression no salt was found. The Pripyat' depression is recently considered by some geologists as a structure independent of the Dnepr-Donets depression. This gave rise to the assumption of a different facial stand of the Devonian in these two regions and of a different age of salt in them. It was not before a

CARD 1/3

20-4-12/60

New Data Concerning the Devonian of the Dnepr-Donets Depression.

deep boring near the village Kalaydintsy (northwest of Lubny) in the year 1956 that clearness was obtained. But the Devonian layers were wrongly classified with the Carboniferous, in spite of the Devonian age of the spores determined from it. Upper Visé deposits occur in the Devonian roof. Numerous foraminifera were determined here which indicate an agreement of the contained rocks with the lower half of the C₁g zone of the Donets

basin. After a thorough description of the individual layers and the fossils contained in them the authors come to the following conclusion:

- 1) Apart from the salt and the lower portion of salt the Devonian is in the Dnepr-Donets depression represented by a normally deposited thick (about 2000 m) mass of Upper Devonian upper salt deposits. They correspond to the upper salt mass of the Upper Devonian of the Pripyat' deflection.
- 2) In the late Devonian era the Dnepr-Donets depression and the Pripyat' deflection formed a uniform geological structure. They possessed a uniform stage formation and sedimentation which took place as well

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20-4-42/50

New Data Concerning the Devonian of the Dnepr-Donets Depression.

under conditions of a continental lagoon as under conditions of a shallow sea. Temporarily a direct connection with the Western European Devonian sea existed.

- 3) The present data indicate that at the late Devonian time salt structures occurred in the relief of the Dnepr-Donets depression which were analogous to that of Kalaydintsy. Toward the beginning of sedimentation of analogues of the lower parts of the C_{1g} zone of the Donets basin they were completely cut off.

There are 10 Slavic references.

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